**LAB 06**

**SUBMISSION INSTRUCTIONS**

Type/write your answers on the document and submit it as a pdf file with the name JaneDoe.pdf (replace JaneDoe with your first and last name respectively).

**QUESTIONS**

1. (10pts): What is the Big O notation of the expressions below:
   1. O(n + n + 9999)

Ans: O(n)

* 1. O((n3 + 3) \* (n + 5))

Ans: O(n4)

* 1. O(12n +6n3 + 1000)

Ans: O(n3)

* 1. 2n3+ O(n2)

Ans: O(n5)

* 1. log2n + 2 + log5n

Ans: O(log n)

1. (20pts): What is the time complexity of the functions below?

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| --- | --- | --- |
|  | **Code** | **Time complexity** |
|  | Question 1 | O(n2) |
|  | Question 2 | O(n) |
|  | Question 3 | O(x+y) |
|  |  | O(n) |
|  |  | O(m2\*n) |
|  | Question 6 | O(1) |
|  | Question 7 | O(n3) |
|  |  | O(1) |
|  | Question 9 | O(n log n) |
|  | Question 10 | O(n3) |